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PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

ARNOLD ENGINEERING COMPANY
MARENGO, ILLINOIS
ILD 005 163 803

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

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EPA Region	:	5
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EXECUTIVE SUMMARY

PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Arnold Engineering Company (Arnold) facility in Marengo, McHenry County, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritizing RCRA facilities for corrective action.

The Arnold facility manufactures electrical components including transmission cores and other magnetic materials. The facility generates and manages the following waste streams: spent mineral spirits (D001), spent trichloroethylene (TCE) (F001), spent corrosive (D002), spent nonchlorinated solvents (F003 and F005), nonhazardous paint sludge, nonhazardous waste coolant, nonhazardous foundry sand, nonhazardous foundry dust, nonhazardous waste ethylene glycol, nonhazardous process wastewater, nonhazardous used oil, and nonhazardous wastewater treatment sludge. The facility formerly generated spent 1,1,1-trichloroethane (TCA) (F002) and spent methylene chloride (F002).

Arnold has operated at its current location since about 1958. The facility occupies 80 acres in a mixed-use area and employs about 500 people. The facility was built on vacant land and was originally owned and operated by Allegheny Ludlum Steel, which changed the facility name to Arnold Engineering Company in 1981. SPS Technologies, Inc., purchased the facility in 1987 and is the current owner and operator.

The facility's current regulatory status is that of a large-quantity generator of hazardous waste. Between 1980 and 1987, the facility was regulated under interim status as a hazardous waste treatment, storage, or disposal (TSD) facility. In November 1987, the Illinois Environmental Protection Agency (IEPA) approved the closure of Arnold's Waste Acid Tank (SWMU 1) and Former Drum Storage Area (DSA) (SWMU 3) and withdrew the facility's RCRA Part A permit application.

PRC identified the following 11 SWMUs and one AOC at the facility during the PA/VSI:

Solid Waste Management Units

1. Waste Acid Tank
2. Drum Storage Building
3. Former Drum Storage Area (DSA)
4. Wastewater Treatment System (WTS)
5. Cooling Ponds
6. Building 5 Nonhazardous Waste Roll-Off
7. Foundry Baghouses
8. Neutralization Tank
9. Chlorinated Solvent Satellite Accumulation Areas (SAA)
10. Nonchlorinated Solvent SAAs
11. Used Oil SAAs

Area of Concern

1. Ground-Water Contamination

The potential for release from facility SWMUs 1 through 4, SWMUs 6 through 9, and SWMU 11 to ground water, surface water, air, and on-site soils is low. SWMUs 1 and 3 were closed with IEPA approval in 1987; the rest of these SWMUs have a low potential for release because they either manage nonhazardous waste or have adequate secondary containment.

The potential for release from the Cooling Ponds (SWMU 5) to ground water and on-site, subsurface soils is high. In the event of an overflow caused by storm water, wastewater in the Cooling Ponds can percolate into soils and ground water in the overflow percolation field. The facility representative stated that such overflow has occurred in the past. The potential for release from SWMU 5 to air is low to moderate. Volatile organic compounds (VOC) have been detected in the wastewater at low concentrations. The potential for release from SWMU 5 to surface water is low.

In 1991, VOCs were detected in the ground-water beneath the facility. VOCs included TCA, acetone, and methyl ethyl ketone. The source of the contamination has not been identified. Concentrations were below IEPA action limits, however, IEPA has not closed the issue. PRC considers the Ground-Water Contamination (AOC 1) to be an AOC.

The potential for release to environmental media from the Nonchlorinated Solvent SAAs (SWMU 10) is low to moderate. During the VSI, one of the drums that comprise the unit was

outdoors. The drum was covered but staining was observed beneath it. The facility representative explained that this was not standard practice. However, staining and pitting of the concrete beneath the drum suggests that drums have been managed there before.

The nearest residential area is located about 100 yards north of the facility. The facility has controlled-entry gates and 24-hour guard surveillance.

The nearest surface water body, the Kishwaukee River, is located 1 mile north of the facility and is used for recreational, agricultural, and industrial purposes. A small, intermittent tributary of the Kishwaukee River is located 0.5 mile northeast of the facility.

Ground water is used as an industrial, agricultural, municipal, and private water supply in the area. The nearest drinking water well is located 100 yards north and downgradient of the facility. There are about seven domestic wells downgradient, of and bordering the facility. The depths of these wells range from 45 to 218 feet in the sand and gravel aquifer. The City of Marengo also draws water from the shallow sand and gravel aquifer. Arnold's ground-water monitoring wells indicated ground water at 15 to 20 feet below ground surface (bgs). Arnold's private well is 846 feet bgs. No other active industrial wells lie within a 3-mile radius of the facility.

No sensitive environments are located on site. The nearest sensitive environment, wetlands along the Kishwaukee River, are located about 0.9 mile north of the facility. The wetland areas are made up mostly of seasonally flooded, palustrine, broad-leaved deciduous forest and semi-permanent open water areas.

PRC makes the following recommendations for the facility:

- Continue monthly ground-water monitoring near the Cooling Ponds (SWMU 5) to monitor potential contamination from this unit. If contamination over IEPA action limits is discovered, overflow process wastewater should be contained.
- Line the discharge ditch that is part of the Neutralization Tank (SWMU 8).
- Manage the Nonchlorinated Solvent SAAs (SWMU 10) indoors.
- Determine the nature and extent of the Ground-Water Contamination (AOC 1) and identify if releases are ongoing.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents to the environment has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Arnold Engineering Company (Arnold) facility (EPA Identification No. ILD 005 163 803) in Marengo, McHenry County, Illinois. The PA was completed on December 9, 1992. PRC gathered and reviewed information from Illinois Environmental Protection Agency (IEPA) and EPA Region 5 RCRA files. PRC also gathered information from the Federal Emergency Management Agency (FEMA), the Illinois State Fire Marshall (ISFM), the Illinois State Geological Survey (ISGS), the Illinois State Water Survey (ISWS), the U.S. Department of Agriculture (USDA), the U.S. Department of Commerce

(USDC), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Geological Survey (USGS). The VSI was conducted on December 10, 1992. It included interviews with facility representatives and a walk-through inspection of the facility. PRC identified 11 SWMUs and one AOC at the facility.

PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 16 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.

2.0 FACILITY DESCRIPTION

This section describes the facility's location; past and present operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors.

2.1 FACILITY LOCATION

The Arnold facility is located at 300 West Street in Marengo, McHenry County, Illinois. Figure 1 shows the location of the facility in relation to the surrounding topographic features (latitude 42°15'14" N and longitude 88°37'14" W). The facility occupies 80 acres in a mixed-use area.

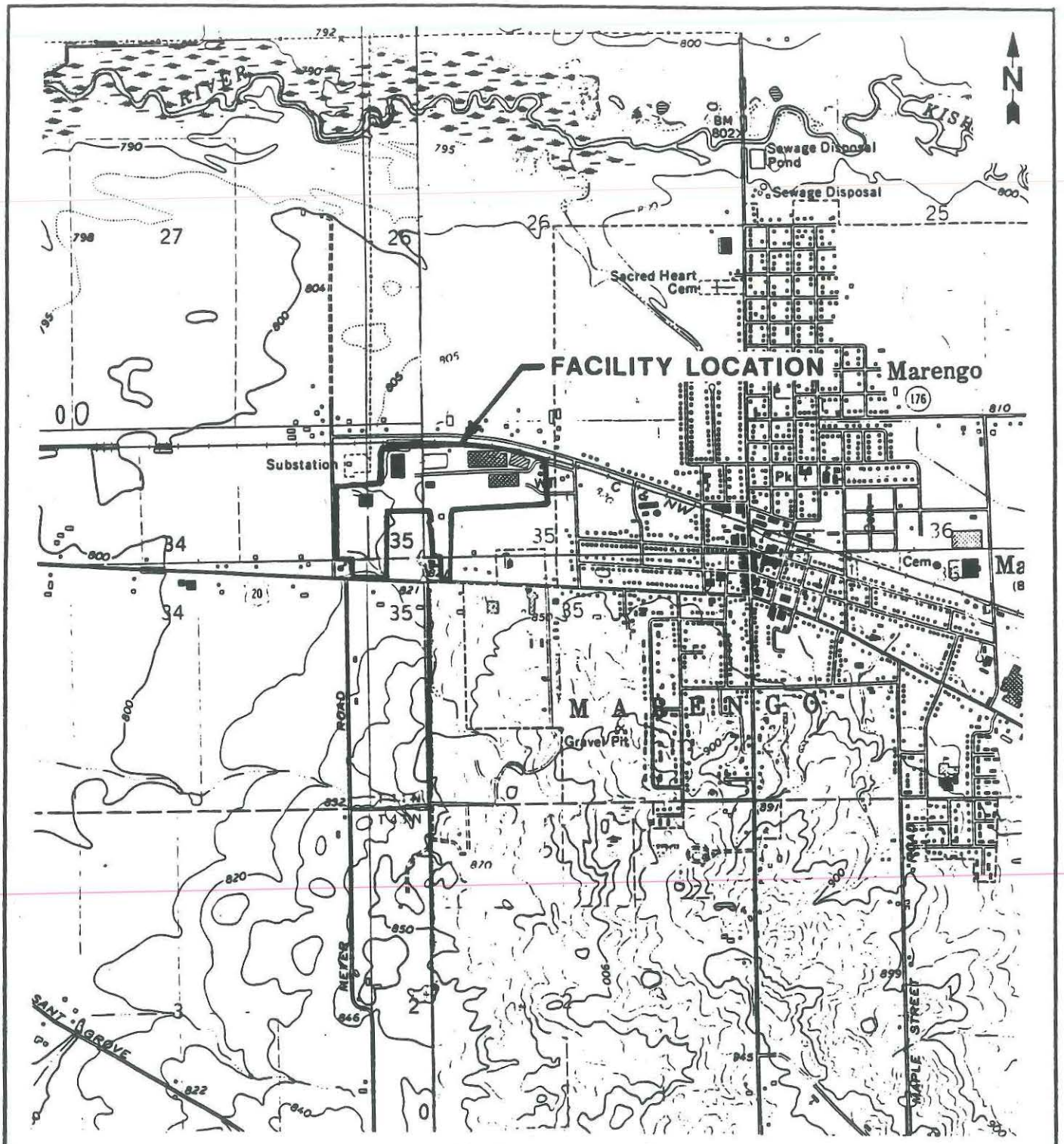
The facility is bordered on the north by Chicago and North Western Railroad tracks and residential property, on the west by open farms and residential property, on the south by U.S. Highway 20, and on the east by residential property.

2.2 FACILITY OPERATIONS

Arnold manufactures electrical components, including transmission cores and other magnetic materials. The facility began operations in 1958 and currently employs about 500 people. Before construction of the facility, the land was vacant and idle.

The facility contains 12 buildings with a floor space of about 400,000 square feet. Building 1 contains the maintenance and tool shops, offices, and the Sintered Alnico operation. Buildings 2, 3, 4, and 7 contain the C-Core and Tape-Core operations. Building 5 contains the Samarium Cobalt and Cast Alnico operations. Building 6 formerly contained the Strontium-Ferrite operation and is now vacant. Building 9 was formerly an airplane hangar and is currently vacant. Buildings 11 and 14 contain the Permalloy Strip and rolling mill operations. Building 12 is used for raw material storage. Building 16, the Drum Storage Building (DSB) (SWMU 2), is used for hazardous waste storage.

The facility operates two wastewater treatment systems: the Wastewater Treatment System (WTS) (SWMU 4) and the Cooling Ponds (SWMU 5). SWMU 4 treats process wastewater and waste



SOURCE: MODIFIED FROM USGS, GARDEN PRAIRIE, RILEY, MARENGO NORTH AND SOUTH QUADRANGLES; 1968, 1970, AND 1975

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FIGURE 1
FACILITY LOCATION

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coolant. Effluent from SWMU 4 is transferred to SWMU 5, where it is cooled and clarified for further use in Arnold's operations. WTS sludge is removed from SWMU 4 and disposed off-site.

Raw materials are stored in aboveground tanks and in containers of various sizes throughout the facility. Building 12 is used solely for raw material storage. Some raw materials, including mineral oil, acetone, methanol, 1,1,1-trichloroethane (TCA), were formerly managed in underground storage tanks (UST).

The facility was originally constructed, owned, and operated by Allegheny Ludlum Steel. In 1981, the name of the facility was changed to Arnold Engineering Company. SPS Technologies, Inc., purchased the facility in 1987 and is the current owner and operator.

2.3 WASTE GENERATION AND MANAGEMENT

This section discusses the wastes generated and managed at the buildings making up the Arnold facility. The facility generates, treats, and stores several hazardous and nonhazardous wastes. The facility determines whether a waste is hazardous or not using two methods: (1) laboratory analysis and (2) knowledge of the generation or treatment of the waste. PRC found no documentation indicating that EPA or IEPA has challenged the classification of waste streams at the facility. Current and former generation and management of both hazardous and nonhazardous wastes are detailed below by facility building, and Table 1 lists current and former waste generation processes by facility building. SWMUs and their current status are identified in Table 2. The locations of SWMUs in relation to the facility layout are shown in Figure 2. Wastes generated at the facility are summarized in Table 3. Waste generation rates, transporters, and final disposition are presented in Table 4.

2.3.1 Building 1

Building 1 houses the maintenance and tool shops, offices, and Sintered Alnico magnet production. The maintenance and tool shops generate spent mineral spirits (D001) and spent TCE (F001) from parts cleaning and degreasing, respectively, and formerly generated spent TCA

TABLE 1

WASTE GENERATING PROCESSES BY BUILDING

BUILDING	PROCESSES	
	Current	Former
Building 1	Sintered Alnico Process and Maintenance and Tool Shops	Unchanged
Buildings 2, 3, 4, and 7	C-Core and Tape Core Processes[a]	Unchanged
Building 5	Samarium Cobalt and Cast Alnico Processes	Unchanged
Building 6	None	Strontium-Ferrite Process[b]
Building 9	None	Airplane Hangar
Buildings 11 and 14	Permalloy Strip Process and rolling mill operation	Unchanged
Building 12	Raw Material Storage	Unchanged
Building 16	Hazardous Waste Storage	Unchanged

Notes:

[a] C-Core and Tape Core production cease by April, 1993.

[b] The Strontium-Ferrite Process was discontinued in July, 1992.

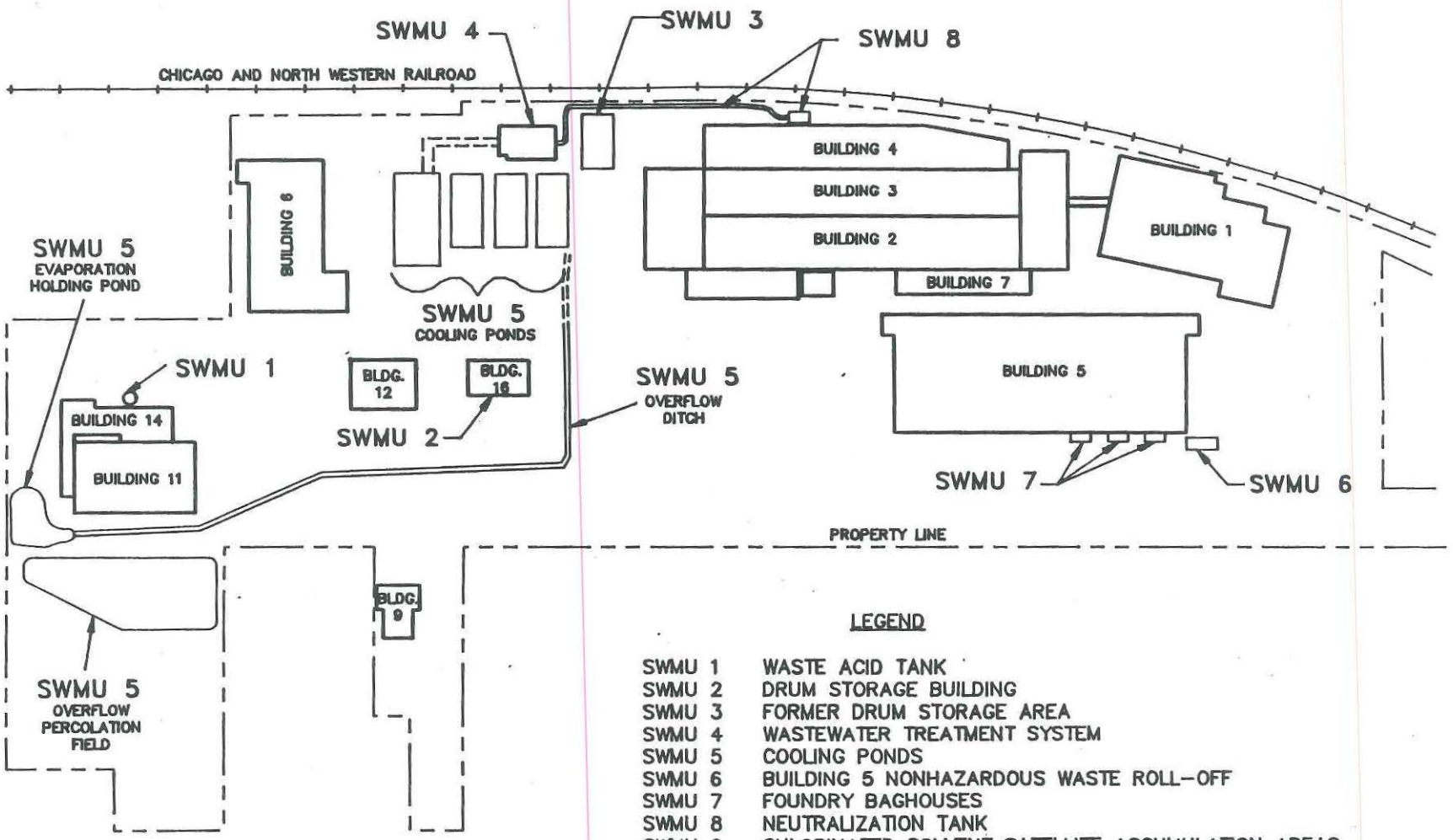
TABLE 2

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
1	Waste Acid Tank	Yes	Inactive; IEPA-approved, RCRA-closed in 1987
2	Drum Storage Building	No	Active; less than 90-day storage of hazardous waste
3	Former Drum Storage Area	Yes	Inactive; IEPA-approved, RCRA-closed in 1987
4	Wastewater Treatment System	No	Active; treatment of nonhazardous waste
5	Cooling Ponds	No	Active; treatment of nonhazardous waste
6	Building 5 Nonhazardous Waste Roll-Off	No	Active; accumulation of nonhazardous waste
7	Foundry Baghouses	No	Active; accumulation of nonhazardous waste
8	Neutralization Tank	No	Active; treatment of hazardous waste
9	Chlorinated Solvent Satellite Accumulation Areas	No	Active; accumulation of hazardous waste
10	Nonchlorinated Solvent Satellite Accumulation Areas	No	Active; accumulation of hazardous waste
11	Used Oil Satellite Accumulation Areas	No	Active; accumulation of hazardous waste

Note:

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.



LEGEND

SWMU 1	WASTE ACID TANK
SWMU 2	DRUM STORAGE BUILDING
SWMU 3	FORMER DRUM STORAGE AREA
SWMU 4	WASTEWATER TREATMENT SYSTEM
SWMU 5	COOLING PONDS
SWMU 6	BUILDING 5 NONHAZARDOUS WASTE ROLL-OFF
SWMU 7	FOUNDRY BAGHOUSES
SWMU 8	NEUTRALIZATION TANK
SWMU 9	CHLORINATED SOLVENT SATELLITE ACCUMULATION AREAS
SWMU 10	NONCHLORINATED SOLVENT SATELLITE ACCUMULATION AREAS
SWMU 11	USED OIL SATELLITE ACCUMULATION AREAS

NOTES:

SWMU 9 IS LOCATED THROUGHOUT BUILDINGS 1, 2, 3, 4, 5, 7, 11, AND 14.

SWMU 10 IS LOCATED THROUGHOUT BUILDINGS 2, 3, 4, AND 7.

SWMU 11 IS LOCATED THROUGHOUT BUILDINGS 5, 11, AND 14.

NOT TO SCALE

SOURCE: MODIFIED FROM ROUX, 1990

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FIGURE 2
FACILITY LAYOUT

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TABLE 3

SOLID WASTES

Waste/EPA Waste Code[a]	Source	Solid Waste Management Unit[b]
Spent mineral spirits/D001	Building 1	None
Spent TCE/F001	Buildings 1, 2, 3, 4, 5, 7, 11, and 14	SWMUs 2 and 9
Spent TCA/F002[c]	Buildings 1, 2, 3, 4, 5, 7, 11, and 14	SWMUs 2, 3, and 9
Spent corrosive/D002	Buildings 2, 3, 4, 7, 11, and 14	SWMUs 1 and 8
Spent nonchlorinated solvents/F003 and F005	Buildings 2, 3, 4, and 7	SWMUs 2, 3, and 10
Paint sludge/NA	Buildings 2, 3, 4, and 7	None
Waste coolant/NA	Buildings 2, 3, 4, and 7	SWMU 4
Spent methylene chloride/F002[c]	Buildings 2, 3, 4, and 7	SWMUs 2, 3, and 9
Foundry sand/NA	Building 5	SWMU 6
Foundry dust/NA	Building 5	SWMUs 6 and 7
Waste ethylene glycol/NA	Building 5	SWMUs 2 and 3
Process wastewater/NA	Buildings 5, 6, 11, and 14	SWMUs 4 and 5
Used oil/NA	Buildings 5, 11, and 14	SWMUs 2, 3, and 11
WTS sludge/NA	WTS	None

Notes:

[a] Not applicable (NA) designates nonhazardous waste.

[b] "None" indicates that the waste stream is not managed on site.

[c] This waste is no longer managed on site.

TABLE 4

WASTE GENERATION RATES, TRANSPORTERS, AND FINAL DISPOSITION

Waste Stream/EPA Waste Code[a]	Generation Rate	Transporter	Final Disposition	Location
Spent mineral spirits/D001	20 gallons per month (gal/mo)	Safety-Kleen	Recycled	Dolton, IL
Spent TCE/ F001	440 gal/mo	Safety-Kleen	Recycled	Dolton, IL
Spent corrosives/D002	--[b]	Managed on site	Neutralized	On Site
Spent nonchlorinated solvents/F003 and F005	550 gal/mo	Safety-Kleen	Fuel blended	Dolton, IL
Paint sludge/NA	1,700 gal/mo	Chemical Waste Management (CWM)	Fixation by Dynacol and landfilled	Dolton, IL
Waste coolant/NA	1,700 gal/mo	Managed on site	Contained in Cooling Ponds	On Site
Foundry sand/NA	96 cubic yards per month	CWM	Landfilled	Cortland, IL
Foundry dust/NA	~ 800 dry gal/mo	CWM	Landfilled	Cortland, IL
Waste ethylene glycol/NA	5 gal/mo	Safety-Kleen	Fuel blended	Dolton, IL
Process wastewater /NA	Recycled at 1,000,000 gallons per day	Managed on site	Recycled	On Site
Used oil/NA	240 gal/mo	Rock Valley Oil	Recycled	Rockford, IL
WTS sludge/NA	850 tons/month	CWM	Landfilled at Parkview Landfill	Menomonee Falls, WI

Notes:

[a] Not applicable (NA) designates nonhazardous wastes.

[b] Facility was unable to provide this information.

(F002). The mineral spirits is contained in a parts cleaner and is continually used until Safety-Kleen Corporation (Safety-Kleen) removes it from the facility. Spent TCE is accumulated in one of two Chlorinated Solvent SAAs (SWMU 9) in Building 1. This waste is eventually stored in the DSB (SWMU 2). Spent TCA was accumulated in a Chlorinated Solvent SAA (SWMU 9). This waste was eventually stored in the DSB (SWMU 2) or the Former DSA (SWMU 3). The facility discontinued the use of TCA in 1991.

Sintered Alnico is a powdered magnet production process. Powdered alloys of aluminum, nickel, and cobalt are blended, pressed, and heated in a sintering furnace. Dust collectors service this production area but the powder is reused in the process rather than sent off as a waste (see Photograph No. 1).

2.3.2 Buildings 2, 3, 4, and 7

Buildings 2, 3, 4, and 7 house the C-Core and Tape Core magnet operations. These operations generate spent corrosive (D002), spent nonchlorinated solvents (F003 and F005), nonhazardous paint sludge, spent TCE (F001), and nonhazardous waste coolant. Spent methylene chloride (F002) and spent TCA (F002) was formerly generated in these buildings.

Spent corrosive (D002) is generated during etching and cleaning operations. This waste is piped to the Neutralization Tank (SWMU 8), where it is neutralized and released to the WTS (SWMU 4). The spent nonchlorinated solvents (F003 and F005) include methyl ethyl ketone, methanol, acetone, and toluene generated during varnishing and painting operations; these solvents are combined into one waste stream and accumulated in one of three Nonchlorinated Solvent SAAs (SWMU 10) in the buildings. After satellite accumulation, this waste is stored in the DSB (SWMU 2) and was formerly stored in the Former DSA (SWMU 3). Nonhazardous paint sludge is generated twice per year when the Neutralization Tank (SWMU 8) is cleaned. This waste is removed from the tank and the facility; it is not managed on site. Spent TCE (F001) is generated during degreasing activities. This waste is accumulated in one of three Chlorinated Solvent SAAs (SWMU 9) in the buildings. After satellite accumulation, this waste is stored in the DSB (SWMU 2). The nonhazardous waste coolant is a synthetic, water-based coolant and water mix generated during machining operations. The waste coolant is released directly to the WTS (SWMU 4). Spent methylene chloride (F002) was formerly generated in these buildings during cleaning operations. This waste was accumulated in a Chlorinated Solvent SAA (SWMU 9). After satellite accumulation, this waste was stored in the DSB (SWMU 2) or the Former DSA (SWMU 3). Spent

TCA (F002) was formerly generated in these buildings during degreasing activities. This waste was accumulated in a Chlorinated Solvent SAA (SWMU 9). After satellite accumulation, this waste was stored in the DSB (SWMU 2) or the Former DSA (SWMU 3).

According to facility representatives, the C-Core and Tape Core operations will be discontinued by April, 1993.

2.3.3 Building 5

Building 5 houses the Samarium Cobalt and Cast Alnico processes. These operations consist of foundry die casting and related operations, including, shot blasting, shaking, grinding, core making, sand molding, and degreasing. These processes generate the following wastes: nonhazardous foundry sand, nonhazardous foundry dust, nonhazardous waste ethylene glycol, nonhazardous process wastewater, spent TCE (F001), and nonhazardous used oil. Spent TCA (F002) was formerly generated in this building.

Nonhazardous foundry sand is collected by shakers, shot blasters, or cyclones and deposited in the Building 5 Nonhazardous Waste Roll-Off (SWMU 6). Nonhazardous foundry dust is collected by several Foundry Baghouses (SWMU 7) around the building. This waste is accumulated in 10- or 55-gallon drums at the baghouses and is ultimately stored in the Building 5 Nonhazardous Waste Roll-Off (SWMU 6). Nonhazardous waste ethylene glycol is generated during the cleaning of a closed-loop cooling line used for the heat treating ovens. The line is cleaned about every 2 years. This waste is stored in the DSB (SWMU 2) and was formerly stored in the Former DSA (SWMU 3). Nonhazardous process wastewater is also generated during cooling operations. This waste is released directly to the WTS (SWMU 4) where it is treated then released to the Cooling Ponds (SWMU 5). Spent TCE (F001) is accumulated in one of two Chlorinated Solvent SAAs (SWMU 9) in the building. After satellite accumulation, this waste is stored in the DSB (SWMU 2). Maintenance activities in Building 5 generate nonhazardous used oil. This waste is accumulated in a Used Oil SAA (SWMU 11) and then stored in the DSB (SWMU 2). This waste was formerly stored in the Former DSA (SWMU 3). Spent TCA (F002) was formerly generated in Building 5. This waste was accumulated in a Chlorinated Solvent SAA (SWMU 9) and stored in the DSB (SWMU 2) or the Former DSA (SWMU 3).

2.3.4 Building 6

Building 6 formerly housed the Strontium-Ferrite magnet production operation which generated nonhazardous process wastewater. The process wastewater was cooling water from baking and grinding operations. This waste was released to the WTS (SWMU 4), where it was treated and released to the Cooling Ponds (SWMU 5). Operations in this building were discontinued in July 1992.

2.3.5 Building 9

Building 9 was formerly an airplane hangar. The building is currently vacant and is not used. No waste generating processes ever were conducted in this building.

2.3.6 Buildings 11 and 14

Buildings 11 and 14 house the Permalloy Strip and rolling mill operations. These operations include magnet forming, cleaning, and annealing. These operations generate nonhazardous used oil, spent corrosive (D002), nonhazardous process wastewater, and spent TCE (F001). Spent TCA (F002) was formerly generated in these buildings.

Nonhazardous used oil is accumulated in the Used Oil SAA (SWMU 11). After satellite accumulation, this waste is stored in the DSB (SWMU 2); it was formerly stored in the Former DSA (SWMU 3). Spent corrosive (D002) is generated during acid and alkaline cleaning of magnet material. This waste is piped to the Neutralization Tank (SWMU 8), where it is treated and then released to the WTS (SWMU 4). Spent corrosive (D002) was formerly stored in the Waste Acid Tank (SWMU 1); the facility closed this SWMU in 1987. Nonhazardous process wastewater is rinse water from acid and alkaline cleaning. This waste is released directly to the Cooling Ponds (SWMU 5). Spent TCE (F001) is generated during degreasing activities. This waste is accumulated in one of three Chlorinated Solvent SAAs (SWMU 9) in the buildings. After satellite accumulation, this waste is stored in the DSB (SWMU 2). Spent TCA (F002) was formerly generated in Buildings 11 and 14. This waste was accumulated in a Chlorinated Solvent SAA (SWMU 9); it was formerly stored in the DSB (SWMU 2) or the Former DSA (SWMU 3).

2.3.7 Building 12

Building 12 is used for raw material storage. No waste generating processes have ever occurred in this building.

2.3.8 Building 16

Building 16 is the DSB (SWMU 2). This building is used for storage of hazardous waste generated at the facility.

2.3.9 WTS

The WTS (SWMU 4) treats process wastewater, waste coolant, surface water runoff and effluent from the Neutralization Tank (SWMU 8). Effluent from this unit is discharged to the Cooling Ponds (SWMU 5). Nonhazardous sludge is removed directly from SWMU 4 and the facility by a private contractor and is landfilled off site.

2.4 HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to ground water, surface water, air, and on-site soils at the facility.

The facility is required by its water pollution control permit (1991-EO-3485) for the WTS (SWMU 4) and Cooling Ponds (SWMU 5) to perform a monthly analysis of ground water. This requirement is in place because ground water beneath the facility has been found to be contaminated with trace amounts of TCA; however, the concentrations found are below the maximum concentration of 0.2 part per million (ppm) allowable for Class I potable resource ground water in Illinois (PRC, 1993a).

PRC observed no documents in the files reviewed that indicate the origin of the ground-water contamination. The contamination may have come from various facility operations. Arnold stored pure TCA in two 6,000-gallon USTs. According to facility representatives and a consultant's report, the tanks were removed or abandoned and were not leaking (Hunter Environmental Services, 1988). Waste TCA was collected in Chlorinated Solvent SAAs (SWMU 9) and stored in the DSB (SWMU 2) or the Former DSA (SWMU 3). During closure of the Former

DSA (SWMU 3), TCA and acetone were detected in soil samples collected near the unit. However, concentrations were below IEPA action limits, and the closure was approved (IEPA, 1987). Facility representatives were unable to provide information on the management of spent solvents (TCA, MEK, acetone) prior to 1980.

IEPA officials are evaluating data from the facility's monthly ground-water monitoring report. At present, no actions are planned because concentrations of TCA in ground water are below allowable limits. IEPA is requiring monthly sampling until October 1, 1994, when it will review the data and take appropriate action (PRC, 1993b). Ground-water contamination is below the maximum limits, and IEPA does not currently consider this an immediate threat. However, since IEPA has not closed the issue and the source has not been identified, PRC considers the Ground-Water Contamination (AOC 1) an AOC.

2.5 REGULATORY HISTORY

Arnold submitted a Notification of Hazardous Waste Activity form to EPA on August 14, 1980 (Arnold, 1980a). Arnold submitted a RCRA Part A permit application on November 14, 1980 (Arnold, 1980b). The Part A permit application listed container storage (S01) with a capacity of 15,000 gallons; tank storage (S02) with a capacity of 14,000,000 gallons; and a tank treatment (T01) with a capacity of 1,500,000 gallons per day. The following wastes and waste codes were listed on the Part A permit application: lead (D008); TCA (F001); acetone and methanol (F003); methyl ethyl ketone (F005); chromium (D007); spent pickle liquor (K062); phenol (U188); and corrosives (D002). IEPA granted the facility interim status as a treatment, storage or disposal (TSD) facility on an unknown date.

The interim license allowed the facility to treat 1,800 gallons per day in the Neutralization Tank (SWMU 8); store 15,000 gallons of hazardous waste in the Former DSA (SWMU 3); and store 14,000 gallons of hazardous waste in the Waste Acid Tank (SWMU 1). The discrepancies between the volumes listed on the Part A permit application and the volumes allowed under interim status are due to Arnold's inclusion of the WTS (SWMU 4) and Cooling Ponds (SWMU 5) among the tank treatment (T01) and storage (S02) systems listed in the permit application. The WTS (SWMU 4) and Cooling Ponds (SWMU 5) were excluded from licensing as exempt treatment.

PRC observed no documents indicating that lead (D008), chromium (D007), or phenol (U188) wastes were generated or stored at the facility. Spent pickle liquor has been designated and treated as a D002 waste, not as a K062 waste as listed in the Part A permit application.

IEPA inspected the facility on four occasions between 1982 and 1991. RCRA inspections in 1982 and 1988 found Arnold to be in compliance. An inspection in 1991 revealed that the facility operating air emission sources without a permit. An inspection in 1987 revealed apparent violations concerning paperwork deficiencies (IEPA, 1982; 1987; 1988a; 1991a). All violations have since been resolved.

In November 1987, IEPA approved the closure of Arnold's Waste Acid Tank (SWMU 1) and Former DSA (SWMU 3) and withdrew the Part A permit. The treatment units listed in the Part A permit application (SWMUs 4, 5, and 8) were for wastewater treatment and elementary neutralization; therefore, they were not required to undergo RCRA closure. The facility is currently regulated as a large quantity generator of hazardous waste storing waste on site for less than 90 days.

Arnold is required to have a permit (1991-E0-3485) to operate the WTS (SWMU 4) and Cooling Ponds (SWMU 5), because the potential exists for the water to be released through evaporation and percolation (IEPA, 1991b). The application for renewal of this permit states that Arnold has prepared a storm water National Pollutant Discharge Elimination System (NPDES) permit application (Arnold, 1991).

The facility is required to have IEPA operating air permits for the following processes: C-Core and Tape Core (permit numbers 73090127, 73090128, 73100163, 73110161); Permalloy Strip (permit number 73090130); Cast Alnico (permit number 740110046); Samarium Cobalt (permit number 86050072); and Sintered Alnico (permit number 78110021). Before July, 1992, the Strontium-Ferrite process also required a permit (permit number 73090129). The facility has violated its air permits. In May 1991, Arnold was found to be operating the heat cycling oven, the varnish drying oven, a baghouse, and storage tanks without operating air permits. Permits for these sources were subsequently obtained (IEPA, 1991c). The facility has no documented history of odor complaints from area residents.

In May 1986, Arnold informed the ISFM of 12 USTs at the facility. All the USTs stored raw materials. The capacity of USTs 1 through 6, 11, and 12 was 1,500 gallons; the capacity of

USTs 7 through 10 was 6,000 gallons. On August 6, 1990, the facility abandoned USTs 1 through 6, which contained mineral oil. On July 7, 1990, the facility abandoned UST 7 which formerly contained acetone. USTs 1 through 7 were filled with sand and abandoned in place. On July 4, 1990, the facility removed USTs 8 and 9, which formerly contained methanol and TCA, respectively. On July 28, 1990, the facility removed UST 10, which formerly contained TCA. USTs 11 and 12 have been used to store kerosene and gasoline, respectively. UST 11 is still in use. UST 12 is empty and was last used in March 1968. PRC observed no documentation that USTs 11 and 12 were leak tested or had any containment. None of the removed or abandoned USTs were leaking according to leak tests (ISFM, 1986 and 1990; Arnold, 1988 and 1989).

USTs 9 and 10 both stored TCA. Ground-Water Contamination (AOC 1) beneath the facility includes low levels of TCA. No soil sampling was documented in the files relating to the removal of UST 9. After UST 10 was removed, three soil samples were obtained from the area of tank 10 and analyzed for TCA. The results of the analysis were 0.02 ppm, 0.09 ppm, and 0.003 ppm (CBC, 1988; Howard Lee & Sons, 1990).

2.6 ENVIRONMENTAL SETTING

This section describes the climate; flood plain and surface water; geology and soils; and ground water in the vicinity of the facility.

2.6.1 Climate

The climate in McHenry County is continental. The average daily temperature is 48.6 degrees Fahrenheit (°F). The highest average daily temperature is 86.3 °F in July. The lowest average daily temperature is 15 °F in January (USDC, 1974).

The total annual precipitation for the county averages 35.62 inches (USDC, 1974). The mean annual lake evaporation for the area is about 30 inches (USDC, 1968). The 1-year, 24-hour maximum rainfall is about 2.5 inches (USDC, 1963).

The prevailing wind is from the west-northwest. Average wind speed is highest in April at 11.7 miles per hour (USDC, 1974).

2.6.2 Flood Plain and Surface Water

The facility is not located in a 100-year flood plain or flood-prone area (FEMA, 1992). The nearest surface water body, the Kishwaukee River, is located about 0.9 mile north of the facility and is used for recreational, agricultural, and industrial purposes. The river flows west with a gradient of 5 feet per mile until it reaches the Rock River system 16 miles downstream. The Rock River flows southwest into the Mississippi River (Roux, 1990).

Surface and storm water runoff from facility ditches, parking lots, and building roofs drains to the WTS (SWMU 4) which discharges to the Cooling Ponds (SWMU 5). The Cooling Ponds include: four recycle ponds; one evaporation holding pond; and an overflow percolation field. SWMU 5 has a total capacity of 8 million gallons and is permitted by IEPA (IEPA, 1991b).

2.6.3 Geology and Soils

The topography of the area has been shaped primarily by glaciers that covered the region in the geologically recent Pleistocene Epoch (ISGS, 1959). Soils directly beneath the facility are of the Saybrook LaRose Series and are dark, well drained to poorly drained soils developed in 0 to 3 feet of loess on calcareous loam till (USDA, 1965).

The first 200 feet of material beneath the facility are glacial till and contain the most important aquifer (sand and gravel aquifer) in the region. Underlying this undifferentiated till are the following rock formations of Ordovician and Cambrian age (top to bottom): Galena dolomite, 170 feet thick; Platteville dolomites and shale, 160 feet thick; Glenwood-St. Peter sandstone, 150 feet thick; Shakopee limestone and dolomite, 120 feet thick; New Richmond dolomitic sandstone, 80 feet thick; Franconia sandstone, 120 feet thick; Ironton-Galesville sandstone, 100 to 300 feet thick; Eau Claire shale and dolomite, 200 to 450 feet thick; and Mt. Simon sandstone, 275 to 900 feet thick. Precambrian-age crystalline rocks underlie the sandstone (Roux, 1990; ISGS, 1959).

2.6.4 Ground Water

The most important aquifer in the vicinity of the facility is the shallow sand and gravel aquifer that exists between 15 and 200 feet below ground surface (bgs) in the region. On-site monitoring wells indicate ground water at about 15 feet bgs flowing north-northwest. There are

several private residential wells downgradient and bordering the facility (Roux, 1990). Three municipal wells located about 1 mile east and upgradient of the facility serve the City of Marengo. The average depth of these wells is 80 feet; the wells draw water from the shallow sand and gravel aquifer. Arnold's private well draws water from about 846 feet bgs. The City of Marengo can utilize Arnold's well in the event of an emergency. The average daily production of the City's wells is 530,899 gallons (IEPA, 1988).

Other important, but not widely used aquifers in the region include the Glenwood-St. Peter sandstone and the Ironton-Galesville sandstone at about 600 and 1,100 feet bgs, respectively (ISGS, 1959).

2.7 RECEPTORS

The facility occupies 80 acres in a mixed-use area in Marengo, Illinois. Marengo has a population of about 4,500. The facility is bordered on the north by Chicago and North Western Railroad tracks and residential property; on the west by open farm fields and residences; on the south by U.S. Highway 20; and on the east by residential property. The nearest residential area is located about 100 yards north of the facility. The facility has controlled-entry gates and 24-hour guard surveillance.

The nearest surface water body, the Kishwaukee River, is located about 0.9 mile north of the facility and is used for recreational purposes. Other surface water bodies in the area include several small, unnamed, diked ponds 1 to 2 miles south and southwest of the facility. A small, intermittent tributary of the Kishwaukee River is located 0.5 mile northeast of the facility.

Ground water is used as an industrial, agricultural, municipal, and private water supply in the area. The nearest drinking water well is located 100 yards north and downgradient of the facility. PRC observed no documentation that this well has been sampled for volatile organic compounds. There are approximately seven domestic wells downgradient of and bordering the facility. The depths of these wells range from 45 to 218 bgs in the sand and gravel aquifer. The City of Marengo also draws water from the shallow sand and gravel aquifer. Arnold's ground-water monitoring wells indicate ground water at 15 to 20 feet bgs. Arnold's private well is 846 feet bgs. No other active industrial wells lie within a 3-mile radius of the facility (IEPA, 1988b; ISWS, 1993).

No sensitive environments are located on site. The nearest sensitive environment, the wetlands along the Kishwaukee River, is located less than 1 mile north of the facility. The wetland areas are made up mostly of seasonally flooded, palustrine, broad-leaved deciduous forest and semi-permanent open water areas (USFWS, 1977).

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 11 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC's observations. Figure 2 shows the SWMU locations.

SWMU 1 **Waste Acid Tank**

Unit Description: The Waste Acid Tank is outdoors along the northern wall of Building 14. The unit consists of an 8,000-gallon aboveground storage tank (AST) formerly used to store spent corrosive (D002) generated from metal pickling operations. The unit is constructed of rubber-lined steel. The area beneath this unit is diked concrete that is not drained.

Date of Startup: The facility representative estimated that this unit began operation in the early 1970s.

Date of Closure: The unit underwent IEPA-approved RCRA closure in 1987 and is currently inactive.

Wastes Managed: This unit formerly managed spent corrosive (D002) generated from metal pickling operations. Waste from this unit was removed from the facility by a private contractor or neutralized in the Neutralization Tank (SWMU 8).

Release Controls: This unit is outdoors and consists of a closed, 8,000-gallon, rubber-lined, steel AST. The unit is currently inactive. The area beneath this unit is undrained, diked concrete with a containment capacity of 9,000 gallons.

History of Documented Releases: No releases from this SWMU have been documented.

Observations:	During the VSI, the unit was empty. PRC observed no evidence of release (see Photograph No. 16).
SWMU 2	**Drum Storage Building (DSB)**
Unit Description:	The DSB is in Building 16, which is about 200 feet south of the Cooling Ponds (SWMU 5). The unit consists of an 80- by 40-foot, aluminum building with a diked, sealed concrete floor. The diking is 12 inches high, and the floor drains to a 100-gallon sump.
Date of Startup:	This unit began operation in 1989.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages spent TCE (F001), spent nonchlorinated solvents (F003 and F005), nonhazardous used oil, nonhazardous waste ethylene glycol, and unidentified waste awaiting laboratory analytical results. The unit formerly managed spent TCA (F002) and spent methylene chloride (F002). Wastes from this unit are ultimately removed from the facility by various contractors for recycling or fuel blending.
Release Controls:	The unit is a closed, locked building. Wastes are kept in sealed containers. The floor in this unit is sealed, diked concrete that drains to a 100-gallon sump. There is a polypropylene liner beneath the concrete.
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	During the VSI, the unit contained an undetermined amount of spent nonchlorinated solvents (F003 and F005), used oil, and several containers of unidentified waste. The facility representative explained that the unidentified waste will be characterized and

disposed of based on the laboratory analysis. PRC observed no evidence of release (see Photographs No. 7 and 8).

SWMU 3	**Former Drum Storage Area (DSA)**
Unit Description:	The Former DSA was outdoors along the northern edge of the facility between Building 4 and the WTS (SWMU 4). The unit consisted of a 22- by 40-foot gravel pad. The unit was used for storage of hazardous wastes in drums. The gravel was underlain by a clay layer that was sloped to the Neutralization Tank (SWMU 8) discharge ditch.
Date of Startup:	The unit began operation in 1981.
Date of Closure:	This unit underwent IEPA-approved RCRA closure in 1987 and is currently inactive.
Wastes Managed:	The unit formerly managed spent nonchlorinated solvents (F003 and F005), spent TCA (F002), spent methylene chloride (F002), nonhazardous used oil, and nonhazardous waste ethylene glycol in 55-gallon drums. Wastes from this unit were ultimately removed from the facility and recycled or fuel blended by various contractors.
Release Controls:	This unit was an outdoor gravel pad over a clay layer. The clay layer was sloped so that runoff would enter the Neutralization Tank (SWMU 8) discharge ditch which drains to the WTS (SWMU 4).
History of Documented Releases:	Soil sampling and analysis during closure revealed TCA and acetone. However, the concentrations detected were below IEPA action limits, and the closure was approved.

Observations:	The unit is no longer active and has been removed. PRC could not observe evidence of release from this unit due to the snow cover (see Photograph No. 12).
SWMU 4	**Wastewater Treatment System (WTS)**
Unit Description:	The WTS is in a shed along the northern boundary of the facility property. The unit consists of four settling tanks used to treat nonhazardous effluent from the Neutralization Tank (SWMU 8); nonhazardous process wastewater from acid and alkaline cleaning operations; and general wastewater from nonproduction sources. The tanks are open-topped and made of concrete. Effluent from this unit is released to the Cooling Ponds (SWMU 5).
Date of Startup:	This unit began operation in 1964.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages nonhazardous effluent from the Neutralization Tank (SWMU 8), nonhazardous process wastewater from acid and alkaline cleaning operations, and general wastewater from nonproduction sources. Effluent from SWMU 4 is released to the Cooling Ponds (SWMU 5). WTS sludge is not managed on site; it is removed directly from the unit and the facility about twice per year by a private contractor and landfilled.
Release Controls:	The unit consists of in-ground, open-topped concrete tanks that are below a vented building that is subject to wind but not rain.
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	During the VSI, the unit was operating. PRC entered this unit and observed no evidence of release (see Photograph No. 10).

SWMU 5	**Cooling Ponds**
Unit Description:	This unit is outdoors. The unit consists of four ponds with 2, 3, 4, and 5 million-gallon capacities; an overflow ditch; an approximately 25,000-square-foot evaporation holding pond with an unknown capacity; and an approximately 360,000-square-foot overflow percolation field. The unit is used to treat process wastewater through cooling and settling of solids and to recirculate the wastewater back to the process. During an overflow event, excess water drains to the overflow ditch that flows about 0.4 mile to the open evaporation holding pond. An overflow from the evaporation holding pond would flow south to the open overflow percolation field. The unit circulates about 1.5 million gallons of process wastewater per day. The unit is permitted to operate and discharge to the evaporation holding pond and overflow percolation field by IEPA. The permit requires that monthly ground-water samples be analyzed and that the results be submitted to IEPA for review.
Date of Startup:	This unit began operation in 1965.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages nonhazardous process wastewater from Buildings 11 and 14, and effluent from the WTS (SWMU 4). Wastewater from this unit is ultimately reused at the facility. Overflow wastewater is subject to evaporation or percolation into the soil.
Release Controls:	The ponds are underlain by a polypropylene liner and layer of bentonite. The evaporation holding pond and overflow percolation field have no release controls.
History of Documented Releases:	No releases from this SWMU have been documented, but the facility representative explained that the evaporation holding pond and overflow percolation field have been used.

Observations:	During the VSI, the ponds were operating but the evaporation holding pond and overflow percolation field were not being used. The facility representative explained that the evaporation holding pond and overflow percolation field were used during overflow periods caused by heavy rains. PRC observed no evidence of release (see Photograph No. 9).
SWMU 6	**Building 5 Nonhazardous Waste Roll-Off**
Unit Description:	The Building 5 Nonhazardous Waste Roll-Off is outdoors at the southeastern corner of Building 5. The unit consists of a steel, 12-cubic-yard roll-off used to accumulate foundry sand and foundry dust. The foundry sand is collected and deposited in this unit by shakers, shot blasters, and cyclones. The area beneath this unit is concrete.
Date of Startup:	This unit began operation in the early 1980s.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages nonhazardous foundry sand and foundry dust. Waste from this unit is ultimately removed and landfilled by a private contractor.
Release Controls:	The unit is outdoors and consists of an open-topped, plastic-lined steel rolloff. The concrete beneath this unit drains through storm drains to the WTS (SWMU 4).
History of Documented Releases:	No releases from this unit have been documented.
Observations:	During the VSI, the unit contained about 10 cubic yards of waste. PRC noted no evidence of release (see Photograph No. 3).

SWMU 7	**Foundry Baghouses**
Unit Description:	The Foundry Baghouses are outdoors along the southern wall of Building 5. The unit consists of baghouses that collect foundry dust and empty into 10- or 55-gallon drums. The baghouses are over concrete that drains through storm drains to the WTS (SWMU 4).
Date of Startup:	The unit began operation in the mid-1970s.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages nonhazardous foundry dust. Waste from this unit is stored in the Building 5 Nonhazardous Waste Roll-Off (SWMU 6) and is ultimately removed from the facility by a private contractor.
Release Controls:	The unit is outdoors but consists of closed baghouses and sealed drums. The baghouses are over concrete that drains through storm drains to the WTS (SWMU 4).
History of Documented Releases:	No releases from this unit have been documented.
Observations:	During the VSI, the baghouses were not operating and did not contain waste. PRC noted no evidence of release (see Photograph No. 4).
SWMU 8	**Neutralization Tank**
Unit Description:	The Neutralization Tank is along the northern wall outside of Building 4. The unit is used to treat spent corrosive (D002) generated from paint stripping and cleaning by elementary neutralization and flocculation of solids. The unit consists of a 9,000-gallon, open-topped concrete tank that is enclosed in a shed,

	and an unlined earthen discharge ditch that drains treated waste to the WTS (SWMU 4).
Date of Startup:	The unit began operation in the mid-1970s.
Date of Closure:	The unit is active.
Wastes Managed:	The unit treats spent corrosive (D002) by elementary neutralization and flocculation. Effluent from this unit drains to the WTS (SWMU 4) for further treatment. Nonhazardous paint sludge from SWMU 8 is removed directly from the tank twice per year by a private contractor and is landfilled off site.
Release Controls:	The tank is within an aluminum shed. The discharge ditch is an open-topped, unlined ditch that drains the tank. The ditch is about 100 yards long and drains to the WTS (SWMU 4).
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	During the VSI, blue staining and blue solid deposits were evident along the entire discharge ditch. The ditch was draining blue-tinted effluent to the WTS (SWMU 4). The blue color was due to paint solids (see Photographs No. 11 and 14). PRC noted no evidence of release from the concrete tank.
SWMU 9	**Chlorinated Solvent SAAs**
Unit Description:	The Chlorinated Solvent SAAs are located indoors throughout the facility. The SAAs contain 55-gallon drums used to accumulate chlorinated solvents generated during degreasing activities. The SAAs are located in Buildings 1, 2, 3, 4, 5, 7, 11, and 14. Floors in the facility buildings are made of concrete and drain through floor drains to the WTS (SWMU 4).

Date of Startup:	The unit began operation in 1980.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages spent TCE (F001). It formerly managed spent TCA (F002) and spent methylene chloride (F002). Chlorinated solvents are managed in 55-gallon, steel drums. When full, the drums are moved to the DSB (SWMU 2). The drums were formerly moved to the Former DSA (SWMU 3).
Release Controls:	The SAAs are indoors and contain 55-gallon, steel drums. The drums are kept sealed. Floors in the facility buildings are made of concrete and drain through floor drains to the WTS (SWMU 4).
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	During the VSI, the SAAs contained an undetermined amount of waste. PRC observed no evidence of release (see Photographs No. 2 and 5).
SWMU 10	**Nonchlorinated Solvent SAAs**
Unit Description:	The Nonchlorinated Solvent SAAs are located primarily indoors throughout Buildings 2, 3, 4, and 7; however, one SAA drum was outdoors during the VSI. The SAAs consist of 55-gallon, steel drums. Indoor floor drains and outdoor storm sewer drains at the facility discharge to the WTS (SWMU 4).
Date of Startup:	The unit began operation in 1980.
Date of Closure:	The unit is active.
Wastes Managed:	The SAAs manage spent nonchlorinated solvents (F003 and F005) in 55-gallon drums. When full, the drums are moved to the DSB

	(SWMU 2). The drums were formerly moved to the Former DSA (SWMU 3).
Release Controls:	The drums are kept sealed or covered. Floor drains in the buildings and outdoor storm sewer drains discharge to the WTS (SWMU 4).
History of Documented Releases:	No releases from this unit have been documented.
Observations:	During the VSI, the unit contained an undetermined amount of waste. A facility representative stated that the SAA drums are supposed to be kept indoors and that he did not know why one drum was outdoors. Staining was observed beneath the drum that was outdoors, but the staining was probably not due to this drum, as the SAA drums are usually kept indoors. Staining beneath other SAAs was also observed (see Photographs No. 13 and 15).
SWMU 11	**Used Oil SAA**
Unit Description:	The Used Oil SAAs are indoors in Buildings 5, 11, and 14. Used oils generated from maintenance activities in Building 5 and production activities in Buildings 11 and 14 are accumulated in these units. The units contain one 55-gallon steel drum each. The floor beneath the units is concrete and drains to the WTS (SWMU 4).
Date of Startup:	This unit began operation in about 1970.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages nonhazardous used oil in 55-gallon steel drums. When full, the drums are moved to the DSB (SWMU 2). The drums were formerly moved to the Former DSA (SWMU 3).

Release Controls:	These units are indoors and consist of 55-gallon steel drums that are kept sealed. The floor beneath the units is made of concrete and drains through floor drains to the WTS (SWMU 4).
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	During the VSI, the unit contained an undetermined amount of used oil. PRC noted no evidence of release (see Photograph No. 6).

4.0 AREAS OF CONCERN

PRC identified one AOCs during the PA/VSI. This AOC is discussed below; its location is shown in Figure 2.

AOC 1 **Ground-Water Contamination**

In 1989, IEPA renewed Arnold's WTS (SWMU 4) and Cooling Pond (SWMU 5) permit (1989-F0-3870) under the requirement that a ground water monitoring system be installed to monitor the impact of percolation on the quality of ground water underlying the site. The monitoring well locations were required to obtain ground water downgradient from the evaporation holding pond and overflow percolation field. In addition, wastewater samples were to be taken of the treated wastewater prior to discharge to each percolation site and analyzed for acetone, TCA, MEK, and total dissolved solids. Ground-water monitoring samples were to be analyzed for the same constituents (IEPA, 1989). In May 1990, Roux installed a monitoring well network and performed ground-water flow assessment at the facility (Roux, 1990). One upgradient monitoring well was installed to obtain representative ground-water quality near but not affected by the percolation areas. Two downgradient monitoring wells were installed to obtain representative samples of ground water in areas and depths most likely to be contaminated. Monitoring Well-1 (MW-1) serves as the upgradient well and MW-02 and MW-3 serve as downgradient wells. National Environmental Testing Inc. (NET) conducts monthly sampling and Arnold submits semi-annual reports of the ground-water monitoring to IEPA-Division of Water Pollution Control. In May 1990, NET reported less than 1 part per billion (ppb) acetone and MEK, and 26 ppb TCA in overflow wastewater in the evaporation holding pond of SWMU 5. Concentrations in wastewater at the overflow percolation field of SWMU 5 were less than 20 ppb acetone and MEK, and 35 ppb TCA. Ground-water samples collected in May 1992 revealed less than 5 ppb acetone, less than 1

ppb MEK, and 1.3 ppb TCA. To date, concentrations of these VOCs in ground water have remained below IEPA enforcement standards.

PRC was unable to determine the origin of contamination from file documents reviewed. The facility formerly used TCA as a degreaser in its operations. Pure TCA was stored in two 6,000-gallon USTs, Tanks 9 and 10. Waste TCA was collected in Chlorinated Solvent SAAs (SWMU 9) and stored in the DSB (SWMU 2) or the Former DSA (SWMU 3). During the closure of the Former DSA (SWMU 3), TCA and acetone were detected in soil samples from the area underlying the unit; however, the concentrations were below IEPA action limits and the closure was approved. UST 10 was removed on July 28, 1988. Upon removal, soil samples were taken from the west end, center, and east end of the pit where UST 10 had been located. TCA concentrations in soil of 0.003 ppm, 0.09 ppm, and 0.02 ppm, respectively, were found (CBC, 1988). No soil sampling was documented in the files relating to the removal of UST 9. The facility currently uses acetone and MEK. Acetone was formerly managed in UST 7. The UST was abandoned in place and was not leaking. Both acetone and MEK are managed in Nonchlorinated Solvent SAAs (SWMU 10) and the DSB (SWMU 2), and were formerly managed at the Former DSA (SWMU 3). Facility representatives were unable to provide information on the management of spent solvents (TCA, MEK, acetone) prior to 1980. At present, the IEPA does not consider the contamination of ground water an immediate threat to the environment, as VOC concentrations are below IEPA enforcement standards for Class I potable ground water resources; however, the issue is not closed and IEPA will reevaluate the situation after compiling and analyzing data from the monthly sampling, which is scheduled to continue through October 1, 1994.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 11 SWMUs and one AOCs at the Arnold facility. Background information on the facility's location; operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors is presented in Section 2.0. SWMU- and AOC-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Sections 3.0 and 4.0. Following are PRC's conclusions and recommendations for each SWMU. Table 5, located at the end of this section, summarizes the SWMUs at the facility and the recommended further actions.

SWMU 1 **Waste Acid Tank**

Conclusions: The past potential for release to ground water, surface water, air, and on-site soils is low. This unit was formerly used to store spent corrosive (D002) generated from metal pickling operations. The tank is aboveground and is made of rubber-lined steel. The area beneath the tank is diked concrete with no drains. There is currently no potential for release from this unit. The unit underwent IEPA-approved RCRA closure in 1987 and is currently inactive.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 2 **Drum Storage Building (DSB)**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low. This unit is an 80- by 40-foot building used to store various wastes until they are removed by contractors for recycling or fuel blending. The unit has a sealed concrete floor. A 12-inch, sealed, concrete dike surrounds the unit. The floor drains to a 100-gallon sump. A liner is located beneath the concrete floor and all wastes are stored in sealed containers.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 3 **Former Drum Storage Area (DSA)**

Conclusions: The past potential for a release from this unit was high. Soil samples obtained during closure activities revealed TCA and acetone in the gravel; however, the contaminants were detected at levels below IEPA action limits, and the closure was approved. The current potential for release to ground water, surface water, air, and on-site soils is low. This unit, an outdoor 22- by 40-foot gravel pad, was formerly used to store spent nonchlorinated solvents (F003 and F005), spent TCA (F002), spent methylene chloride (F002), nonhazardous used oil, and nonhazardous waste ethylene glycol. The wastes were removed by various contractors and recycled or fuel blended. There is currently no potential for release from this unit. This unit underwent IEPA-approved RCRA closure in 1987 and is currently inactive.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 4 **Wastewater Treatment System (WTS)**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low. The unit consists of four concrete open-topped tanks used to treat nonhazardous Neutralization Tank effluent, nonhazardous process wastewater, and general wastewater. Sludge generated by this unit is removed twice per year by a private contractor and landfilled. The unit lies below a vented building that is subject to wind but not rain. There has been no documented release from this unit.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 5 **Cooling Ponds**

Conclusions: The overall potential for release to environmental media from this unit is high. The unit consists of four open ponds; an evaporation holding pond; and an overflow percolation field. The unit cools and settles solids out of

process wastewater, which is reused. The potential for release to environmental media is summarized below.

Ground Water and On-Site Soils: The potential for release is high. The ponds are underlain by a liner and a bentonite seal; however, in the event of an overflow, waste can percolate into ground water and soils in the evaporation holding pond and overflow percolation field. Although no releases have been documented, the facility representative stated that overflow has occurred in the past.

Surface Water: The potential for release is low. The nearest surface water body, the Kishwaukee River, is located 1 mile north of the facility. Wastewater in SWMU 5 does not have an overland pathway to migrate off site. Storm sewers at the facility drain to the WTS (SWMU 4).

Air: The potential for release is low to moderate. The ponds are open and subject to volatilization. Volatile organic compounds (VOC) have been detected in the wastewater at low concentrations.

Recommendations: PRC recommends that the facility continue monthly ground-water monitoring near the evaporation holding pond and overflow percolation field. If contamination is discovered, the facility should assess the potential for harm to human health and the environment and conduct appropriate remediation activities.

SWMU 6 **Building 5 Nonhazardous Waste Roll-Off**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low. The unit is a 12-cubic-yard, plastic-lined, steel rolloff used to store nonhazardous waste. The unit is subject to wind, but the area around this unit is concrete and drains to the WTS (SWMU 4).

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 7 **Foundry Baghouses**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils from this unit is low. The unit consists of baghouses used to accumulate nonhazardous foundry dust in sealed containers. The baghouses are over concrete that drains to the WTS (SWMU 4).

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 8 **Neutralization Tank**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low. The unit consists of a 9,000-gallon, concrete tank and a discharge ditch that drains to the WTS (SWMU 4). The unit is outdoors; however, the tank is enclosed in an aluminum shed. The tank treats spent corrosive (D002), but the waste is rendered nonhazardous before it is released to the discharge ditch. During the VSI, paint solids were observed in the ditch, but this waste has been analyzed and is nonhazardous.

Recommendations: PRC recommends that the facility line the discharge ditch.

SWMU 9 **Chlorinated Solvent SAAs**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low. The Chlorinated Solvent SAAs are located indoors and contain 55-gallon, sealed, steel drums used to accumulate chlorinated solvents. The drums rest on concrete floors that drain through floor drains to the WTS (SWMU 4).

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 10 **Nonchlorinated Solvent SAAs**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low to moderate. The SAAs are located indoors throughout the

facility; however, during the VSI, one SAA drum was found outdoors. Staining was observed beneath this drum. The SAAs contain 55-gallon, steel drums that are transferred to the DSB (SWMU 2) when full. The floors under these SAAs are made of concrete. The drums are kept sealed or covered.

Recommendations: PRC recommends the facility manage this waste indoors.

SWMU 11 **Used Oil SAAs**

Conclusions: The potential for release to ground water, surface water, air, and on-site soils is low. The Used Oil SAAs are located indoors and contain 55-gallon, sealed, steel drums used to accumulate used oil. the drums rest on concrete floors that drain through floor drains to the WTS (SWMU 4).

Recommendations: PRC recommends no further action for this SWMU at this time.

AOC 1 **Ground-Water Contamination**

Conclusions: Trace amounts of TCA have been found in ground-water. The origin of the contamination is unknown; however, it may have come from one of the areas outlined in Section 4.0. The facility is required to submit semi-annual ground-water monitoring reports to IEPA from monthly ground water samples. Concentrations of TCA in ground-water reported to date have been below IEPA enforcement standards, however, IEPA has not closed the issue and will reevaluate the situation after compiling and analyzing data from ground-water monitoring through October 1, 1994.

Recommendations: PRC recommends that the facility continue monthly ground-water monitoring to determine the nature and extent of the Ground-Water Contamination (AOC 1) and identify if releases are ongoing.

TABLE 5

SWMU AND AOC SUMMARY

SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
1. Waste Acid Tank	Early 1970s to 1987	None	No further action
2. Drum Storage Building	1989 to present	None	No further action
3. Former DSA	1981 to 1987	Soil sampling and analysis during closure revealed TCA and acetone concentrations below IEPA action limits	No further action
4. WTS	1964 to present	None	No further action
5. Cooling Ponds	1965 to present	VOCs have been detected at low concentrations both in the wastewater and ground-water; although no releases have been documented, facility representatives stated that overflows have occurred	Continue monthly ground-water monitoring near the evaporation holding pond and overflow percolation field; If contamination is discovered, assess the potential for harm to human health and the environment and conduct appropriate remedial activities
6. Building 5 Nonhazardous Waste Roll-Off	Early 1980s to present	None	No further action
7. Foundry Baghouses	Mid-1970s to present	None	No further action
8. Neutralization Tank	Mid-1970s to present	During the VSI, blue staining and blue, solid deposits were evident along the entire ditch	Line the discharge ditch

TABLE 5 (continued)

SWMU AND AOC SUMMARY

SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
9. Chlorinated Solvent SAAs	1980 to present	None	No further action
10. Nonchlorinated Solvent SAAs	1980 to present	None	The drums should be kept indoors
11. Used Oil SAAs	About 1970 to present	None	No further action

AOC	Dates of Operation	Evidence of Release	Recommended Further Action
1. Ground-Water Contamination	1991 to present	July 1, 1991	Continue ground-water monitoring to determine the nature and extent of contamination and identify if releases are ongoing

REFERENCES

Arnold Engineering Company (Arnold), 1980a. Notification of Hazardous Waste Activity, EPA Form 8700-12, August 14.

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U.S. Department of Agriculture (USDA), 1965. McHenry County Soils, Soil Report 81, August.

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USDC, 1974. Climates of the States, Eastern States, Volume 1, Water Information Center, Port Washington, New York.

U.S. Fish and Wildlife Service (USFWS), 1977. National Wetlands Inventory Maps for Garden Prairie, Marengo North, Marengo South, and Riley, Illinois Quadrangles.

U.S. Geological Survey (USGS), 1968. 7.5-Minute Garden Prairie, Illinois Quadrangle Map.

USGS, 1970. 7.5-Minute Riley, Illinois Quadrangle Map.

USGS, 1975. 7.5-Minute Marengo North and Marengo South, Illinois Quadrangle Maps.

ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 005 163 803

II. SITE NAME AND LOCATION

01 SITE NAME *(Legal, common, or descriptive name of site)*	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER				
Arnold Engineering Company	300 West Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Marengo	IL	60152	McHenry	111	
09 COORDINATES: LATITUDE 42°15'14" N	**LONGITUDE** 88°37'14" W				

10 DIRECTIONS TO SITE *(Starting from nearest public road)*
U.S. Highway 20 west from Marengo, right on West Street to Arnold Engineering Company entrance.

III. RESPONSIBLE PARTIES

01 OWNER *(If known)*	02 STREET *(Business, mailing residential)*		
SPS Technologies, Inc.	P.O. Box 1000		
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**
Newtown	PA	18940	(215) 721-1771
07 OPERATOR *(If known and different from owner)*	**08 STREET** *(Business, mailing, residential)*		
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**

13 TYPE OF OWNERSHIP *(Check one)*
■ A. PRIVATE ☐ B. FEDERAL: _____ *(Agency Name)* ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ (Specify) ☐ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE *(Check all that apply)*
■ A. RCRA 3010 DATE RECEIVED: 08 /18 /80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE *(CERCLA 103 c)* DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
■ YES DATE 12/10/92
☐ NO

BY *(Check all that apply)*
☐ A. EPA ■ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ *(Specify)*

CONTRACTOR NAME(S): PRC Environmental Management, Inc. (PRC)

02 SITE STATUS *(Check one)*
■ A. ACTIVE ☐ B. INACTIVE ☐ C.UNKNOWN

03 YEARS OF OPERATION
1958 (BEGINNING YEAR) | Present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Spent corrosive (D002), spent trichloroethylene (TCE) (F001), spent nonchlorinated solvent (F003 and F005), and several nonhazardous wastes including process wastewater, foundry dust, foundry sand, waste coolant, used oil, paint sludge, and waste ethylene glycol. The facility formerly generated spent 1,1,1-trichloroethane (TCA) (F002) and spent methylene chloride (F002).

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Marengo has a population of about 4,500. The nearest residential areas are located adjacent to the facility to the north and east. Ground water flows north toward residential wells. Volatile organic compounds (VOC) have been detected beneath the facility at concentrations below IEPA action limits.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION *(Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)*
☐ A. HIGH *(Inspection required promptly)* ■ B. MEDIUM *(Inspection required)* ☐ C. LOW *(Inspect on time-available basis)* ☐ D. NONE *(No further action needed; complete current disposition form)*

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF *(Agency/Organization)*			03 TELEPHONE NUMBER
Kevin Pierard	U.S. EPA			(312) 886-4448
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Scott A. Storlid		PRC	(414) 821-5894	02 / 16 / 93 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 005 163 803

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ■ C. SLUDGE
- ☐ D. OTHER _____ *(Specify)*
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TON Unknown

CUBIC YARDS Unknown

NO. OF DRUMS Unknown

03 WASTE CHARACTERISTICS *(Check all that apply)*

- ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. INFLAMMABLE
- ■ H. IGNITABLE
- ■ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	20,000	gallons per year (gal./yr.)	Wastewater Treatment System sludge, paint sludge
OLW	OILY WASTE	4,000	gal./yr.	
SOL	SOLVENTS	14,600	gal./yr.	F001, F002, F003, F005, and D001
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS	Unknown	Unknown	Neutralized on site
BAS	BASES	Unknown	Unknown	Neutralized on site
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
BAS	Spent caustic	-	Neutralization on site		
ACD	Phosphoric acid	7664-38-2	Neutralization on site		
ACD	Hydrochloric acid	7647-01-0	Neutralization on site		
SOL	Acetone	0067-64-1	Recycled off site		
SOL	Trichloroethylene	0079-01-6	Recycled off site		
SOL	Toluene	0108-88-8	Recycled off site		
SOL	Methylene Chloride	0075-09-2	Recycled off site		
SOL	Methyl ethyl ketone	0078-93-3	Recycled off site		
SOL	Methanol	0067-56-1	Recycled off site		
OCC	Ethylene glycol	0107-21-1	Fuel blended off site		

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Phosphoric Acid	7664-38-2	FDS	Methyl ethyl ketone	0078-93-3
FDS	Caustic	-	FDS	Methanol	0067-56-1
FDS	Trichloroethylene	0079-01-6	FDS	Ethylene glycol	0107-21-1
FDS	Toluene	0108-88-3	FDS		

VI. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

EPA Region 5 Files
IEPA Files
Bob Lippe, Facility Representative

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: IL	02 SITE NUMBER: ILD 005 163 803

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ■ OBSERVED (DATE: 1987) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 21 — 04 NARRATIVE DESCRIPTION

TCA and acetone have been detected in ground water beneath the facility at concentrations beneath IEPA action limits; however, at least seven residences are adjacent to and downgradient of the facility.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

None

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE:) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,500 — 04 NARRATIVE DESCRIPTION

The facility manages several volatile wastes.

01 ■ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE:) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,500 — 04 NARRATIVE DESCRIPTION

The facility manages several volatile and ignitable wastes.

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE:) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 500 — 04 NARRATIVE DESCRIPTION

Employees may potentially be at risk; however, the facility is secured to prevent the public from being at risk.

01 ■ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: 1987) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 21 (Acres) — 04 NARRATIVE DESCRIPTION

TCA and acetone were discovered in soils near the Former Drum Storage Area at concentrations below IEPA action levels.

01 ■ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: 1987) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 21 — 04 NARRATIVE DESCRIPTION

See A above.

01 ■ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 500 — 04 NARRATIVE DESCRIPTION

See E above

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

None

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: IL	02 SITE NUMBER: ILD 005 163 803

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The facility's buildings and outdoor areas drain to the Wastewater Treatment System.

01 ☐ O. CONTAMINATION OF SEWERS, DRAINS, WWTPS — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Sewers drain to the on-site Wastewater Treatment System.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:_____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 4,500

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

EPA Region 5 Files
IEPA Files
Bob Lippe, Facility Representative

ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

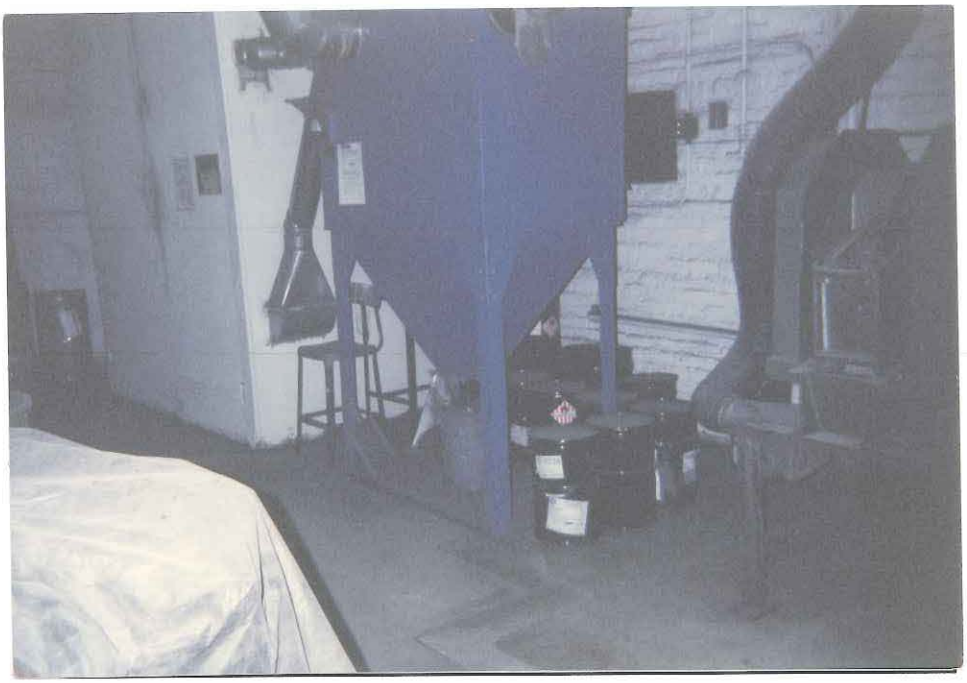
Arnold Engineering Company
300 West Street

Marengo, Illinois 60152

ILD 005 163 803

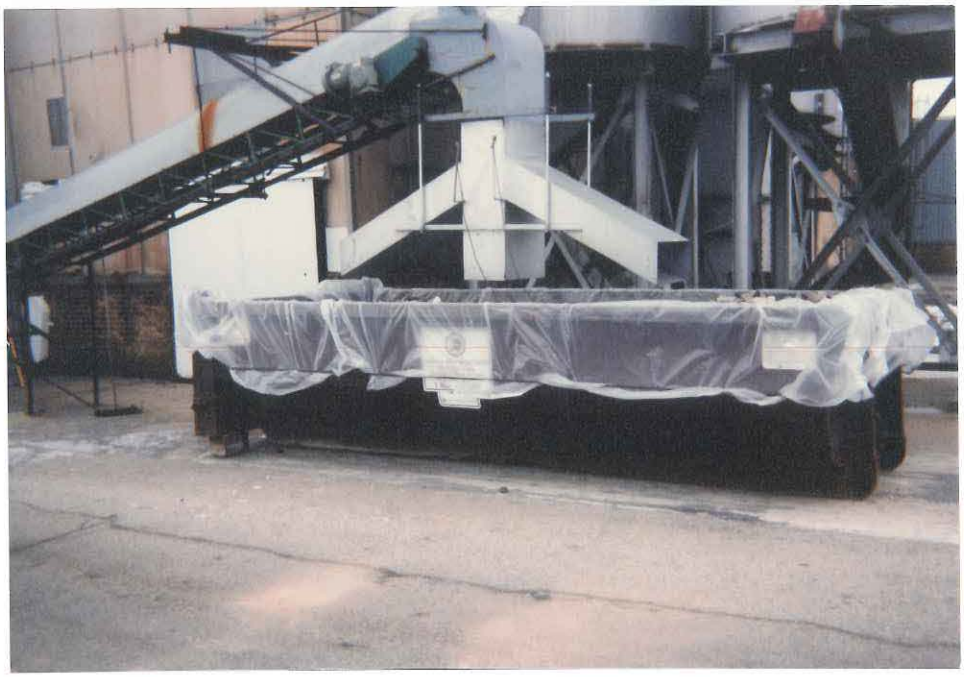
Date:	December 10, 1992
Primary Facility Representative:	Robert Lippe, Supervisor of Analytical Services, Arnold Engineering Company (Arnold)
Representative Telephone No.:	815-568-2000
Inspection Team:	Trent Schade, PRC Environmental Management, Inc. (PRC) Scott Storlid, PRC
Photographer:	Scott Storlid, PRC
Weather Conditions:	Overcast, wind from the west at 10 to 15 miles per hour, 30 °F
Summary of Activities:	The visual site inspection (VSI) began at 9:00 a.m. with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. The facility representative then discussed the facility's past and current operations, solid wastes generated, and release history. The facility representatives provided the inspection team with copies of requested documents.
	The VSI tour began at 1:10 p.m. The inspection team began in Building 1, where the team viewed Chlorinated Solvent Satellite Accumulation Areas (SAA) (SWMU 9). The tour then moved to Building 5, where the Building 5 Nonhazardous Waste Roll-Off (SWMU 6), Foundry Baghouses (SWMU 7), Chlorinated Solvent SAA (SWMU 9), and Used Oil SAA (SWMU 11) were viewed. The tour then moved to the Drum Storage Building (DSB) (SWMU 2). The team proceeded to view the Cooling Ponds (SWMU 5), Wastewater Treatment System (WTS) (SWMU 4) and the Former DSA (SWMU 3). The inspection team then moved to Buildings 2, 3, 4, and 7, where the Nonchlorinated Solvent SAAs (SWMU 10) and the Neutralization Tank (SWMU 8) were viewed. The tour then proceeded to Buildings 11 and 14 where, the Waste Acid Tank (SWMU 1) was viewed.

The tour concluded at 2:57 p.m., after which the inspection team held an exit meeting with the facility representative. The VSI was completed and the inspection team left the facility at 3:05 p.m.



Photograph No. 1 — Location: Building 5
Orientation: Northeast — Date: December 10, 1992
Description: This photograph shows the powder collector in the Sintered Alnico process area. The powder collector is not a SWMU because the powder is captured for reuse.

Photograph No. 2 — Location: SWMU 9
Orientation: North — Date: December 10, 1992
Description: This photograph shows a Chlorinated Solvent SAA (black drum on the right), two drums of virgin oils (on the left), and two empty buckets.



Photograph No. 3 Location: SWMU 6
Orientation: North Date: December 10, 1992
Description: This photograph shows the Building 5 Nonhazardous Waste Roll-off.

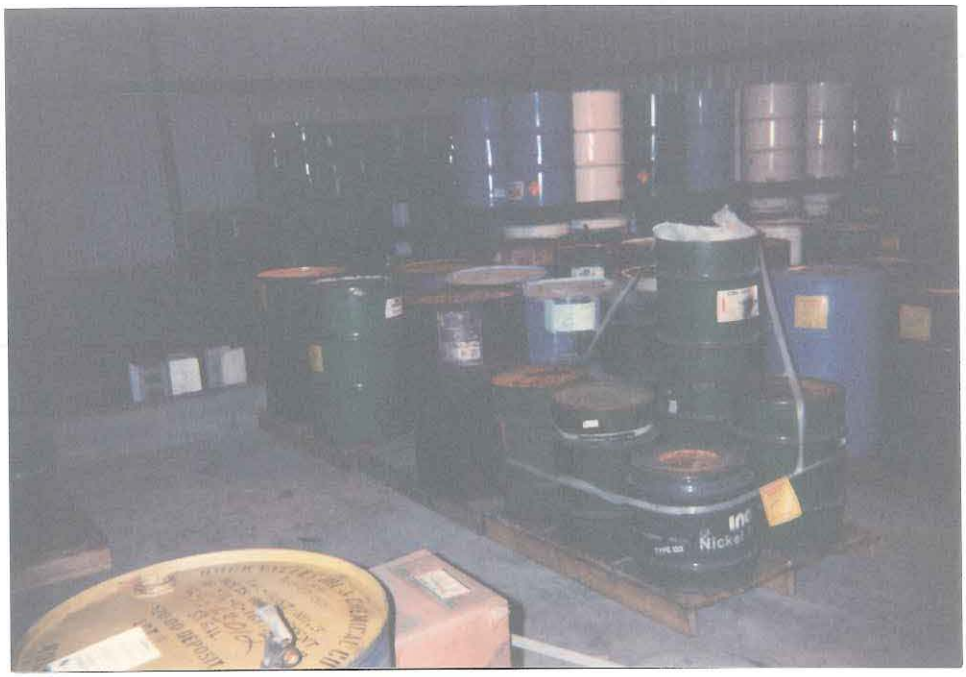
Photograph No. 4 Location: SWMU 7
Orientation: Northwest Date: December 10, 1992
Description: This photograph shows a Foundry Baghouse.

Photograph No. 5
Orientation: South
Description: This photograph shows a Chlorinated Solvent SAA (black drum).

Location: SWMU 9
Date: December 10, 1992

Photograph No. 6
Orientation: South
Description: This photograph shows a Used Oil SAA.

Location: SWMU 11
Date: December 10, 1992



Photograph No. 7 Location: SWMU 2
Orientation: South Date: December 10, 1992
Description: This photograph shows drums of waste being stored in the Drum Storage Building. Note the 12-inch, concrete dike in the back of the photograph.

Photograph No. 8 Location: SWMU 2
Orientation: South Date: December 10, 1992
Description: This photograph shows the loading dock for the Drum Storage Building.

Photograph No. 9
Orientation: West
Description: This photograph shows the Cooling Ponds.

Location: SWMU 5
Date: December 10, 1992

Photograph No. 10
Orientation: Northwest
Description: This photograph shows the WTS.

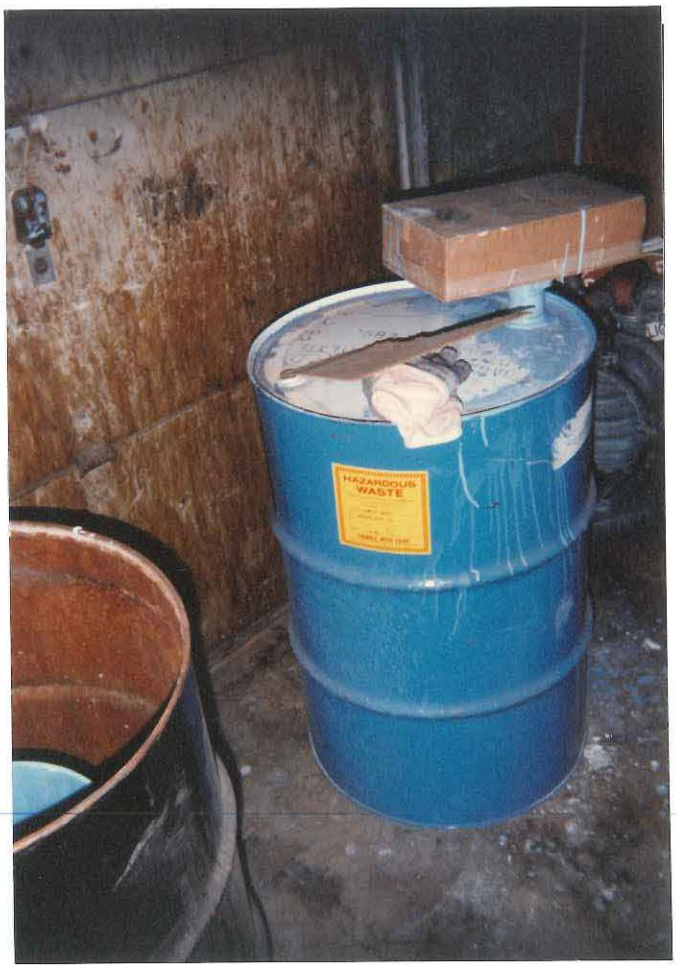
Location: SWMU 4
Date: December 10, 1992

Photograph No. 11 Location: SWMU 8
Orientation: North Date: December 10, 1992
Description: This photograph shows the discharge ditch (part of the Neutralization Tank) that drains to the WTS.

Photograph No. 12 Location: SWMU 3
Orientation: Northeast Date: December 10, 1992
Description: This photograph shows the location of the Former DSA, which underwent RCRA closure in 1987.

Photograph No. 13 Location: SWMU 10
Orientation: East Date: December 10, 1992
Description: This photograph shows a Nonchlorinated Solvent SAA. Note the staining and pitting of the concrete around the unit.

Photograph No. 14 Location: SWMU 8
Orientation: South Date: December 10, 1992
Description: This is a photograph of the Neutralization Tank.



Photograph No. 15 Location: SWMU 10
Orientation: North Date: December 10, 1992
Description: This is a photograph of a Nonchlorinated Solvent SAA. Note the staining on the concrete floor in the area.

Photograph No. 16 Location: SWMU 1
Orientation: Southwest Date: December 10, 1992
Description: This photograph shows the Waste Acid Tank (on left), which underwent RCRA closure in 1987.

ATTACHMENT C

VISUAL SITE INSPECTION FIELD NOTES

PA/VSI @
Arnold Engineering.
12/9/92
Weather: Overcast. No wind,
T ~ 25°F.
Morengo, IL
w/ ILD

9:05 Began Meeting w/ Bob Lippe

Facility Assembles
Magnetic Components

Building 5:
Powr Alnicol
Sinarmium Co&H Manufactu

Building 1:
Form small Parts Sintered
Alnico
Tot Schuch

Tool Maintenance Shop
Top floor - Offices

Buildings 2, 3, 4 & 7:
C-core core for
transformers
(should be closed
by end of March)
Tape-core
Ni-coated tape formed
into toroids
(should be closed
by end of March)
Moly-Permalloy
Involves painting

Building 6 has been closed
since July.
Tot Schuch

(10)

Buildings 11 & 14
Rolling Mill
Material is Rolled down
to various gages
Sold internally &
externally

Building 12 storage for
raw bar, Packing
Materials, etc. No processes

Water Tower: ~100,000 gpd
WTP: ~ 1 Mgd
cascade system water

Building 5:
Raw Materials: Al 6-8
Ni 12-15
Co - 24-40
Fe -
Cu -
Tant Slude -

(11)

other metals including
Binding Material

Wastes: Foundry Sand: Roll-off
Box on west end
Chem-Waste of Elgin
taken to DeKalb Co.
in Cortland.
2 - 12 yd³ rolloffs/wk.
TCLP & EP Tox
have been performed.

Foundry Dust Collecting
2-areas: 1- Bag house
2- Smoke at
collection
Scrubber

Tant Slude

Bag houses are emptied ~ once/month.

Dust Collects emptied weekly about 1 yd³ is generated

Rough Grind generates synthetic water-based coolant, closed system, solids build-up after 1½ years. Liquid goes to WTP solids sent to Ohio to be smelted to recover precious metals

Vapor Decreaser - 1,1,1 - Trichloroethane certain parts need to be cleaned with solvents.

Tim Schuh

degreaser. Any waste generated is sent to Safety-Kleen @ Dalton. All manifested with other 1,1,1 - ship mats. Distillation & Fuel Blend.

Army (or Rare Earth Dept.) Samarium Cobalt - Powder is Pyrophoric. Kept under inert gas. Hexane. No waste generated. Just added.

Ethylene Glycol; closed system; only waste generated when machine is washed.

Tim Schuh

(14)

Ethylene Glycol is sent to S-K.

Building 1

S-K - parts washers w/ mineral spirits. Formerly used 1,1,1-Trichlor.

Machine Shop.

Coolants. Some 1,1,1 used. Goes to other 1,1,1 accounts. ~ 1 drum / 90 days

Sintered Alnico

Buy Powered alloy blends. mixed Blended in Powder Press Parts out. Run through sintered furnace.

Test Schedule

(15)

2 Shot Blasts Dust collectors for Powered 1,1,1 - Barrel ~ 1.5 barrel / 90 days

Upstairs of Building 1 is offices

Building 2, 3, 4 & 7

Cut - Core area. Tape is wound into Hi-e C-Core form

MEK is generated & sent to S-K.

C-cores cut w/ Water-sol. etched w/ Phosphoric Acid

Test Schedule

Any unextracted acid goes to neutralization tank, Rinse water goes to Ponds.

Burn-off oven Permitted to cook-off

Annealing ovens. Heated to 1400 - 1500 °F in environment of H_2

<u>Tape-Core</u>

Used Methanol, 20 or 30 drums / 90 days. Manifested 1,1,1 used for degreasing in this area.

After cores cooled & wound encased in Nylon or Alum case.

Tent Schade —

Nylon cases sealed with Phenol Methanol

Permalloy Manufacturing.

Cast in Building 5

Sent to Allegheny Ludlum Steel.

Get Back Frags.

Powderized & sized

Dust Collected.

Coated in "Cement Mixtures", Sodium Silicate, Milk of Magnesia,

Pored form Toroids

Formed in Presses.

Annealed.

Painted. Liquid Paint

Caustic stripper removes Paint From Belt.

Tent Schade —

(18)

Neutralized in
" Tank. Sent
to CID. Now
Goes to Clean Waste
in Milwaukee,
Now D-Trex of
Chicago who send
to Dyacol for Fuels
& Disposal.
Waste Paint sent
to Pedrol-Chem
9,000-gal capacity
2 - 5,000 gallon
Trucks 2x/year.
~ 20,000 gallons
Paint wastes

Paint comes from Building 10
Toluene is used in
Paint lines to flush
Not Solvent

(19)

Process cond change
to Powdered Paint.

Toluene goes into
Fuel blending.
~ 1 drum/year.

Building 10 is used
for Raw Product
Flammable storage.

Methnol & Acetone tanks
West of Building 10.

Building 6 - closed.
Cleaned out.
Calciner. Reused
Water Based coolant
tank for curing
Not Solvent

Facility operations have been moved to Tennessee.
Pressing Operating

<u>Building 11 & 14:</u>
~~[illegible]~~ Rolling Mill
2 aboveground tanks for Rolling Mill oil.
295°F flashpoint
Non Hazardous.
Rock Valley oil in Rockford, IL recycles the oil.
74 - Barrels
Rolled Product goes thru ovens. 1,1,1 used for degreasing. 3 or 4 drums generated per month, 4 or 5 / quarter

[signature]

<u>USTs</u>
12 ~~[illegible]~~ total
All have been closed
None were waste
Solvents
Rolling Mill oils
Vegetable Oil
Fuel Oil
10,000 gallon Gasoline
Acetone
1,1,1 tanks
Either Abandoned or Removed.

<u>Building 11 & 14 (cont):</u>
Alkaline cleaning goes to WTP.
Coating line Phosphate coating.

[signature]

generates phosphoric acid. Goes to neutralization tank.

Property is on ~100 acres
~500 employees
Facility was built as Roadhouse for old RR.

Wholly owned Subsidiary

In 1958, Allegheny Ludlum Steel
In 1981, Allegheny Corp.
In 1987 to Present:
SPS Tech. Inc.
PO Box 1000
New Town, Penn.
18940

Facility has Industrial Well on Fty. Well is ~ 850'

Text Schedule

North of Facility Residences might be on private

3 Monitoring Wells are located on.

G.W. Flows N-NW
NET Midwest Samples
Monthly. Reported Semi-annually.

Completely fenced. Guarded

10:55 Facility Rep. and Volunteers Files available for us to look at. We decided to look at the Files

Text Schedule

12 USTs (Hazardous) 2 UST Non Hazardous

No	Material	Location	Capacity	Filled or Removed ?
1	Rolling mill oil	11 & 14	1,500 gall	Filled
2				
3				
4				
5				
6				
7	1,1,1	Bay 11	6,000	Removed
8	Methanol	N of 4	6,000	Removed
9	1,1,1	"	"	"
10	Acetone	"	6,000	Filled
11	Kerosene	N of 5	1,500	Removed
12	Gasoline		10,000	Removed
Non hazardous				
13	Vegetable Oil			
14	Fuel Oil			

— Tank Schedule —

WWTP Sewage Treatment Plant
From Sanitary
Alkaline Rinse
to Ponds
Every thing else goes
to Ponds.

Overflow areas South
or Rte 20.
NPDES Storm Water
Permit appld for.
Ponds cool & settle
water. Chlorinate &
add sewage treatment
materials to soften water
remove salts.

Tim Schultz

Facility Sewage Pumps
are on pump provided
~~Facility is~~
We discussed with Facility
the WWTP procedures.

11:30 Before Breaking for lunch
discussed what we would do
after lunch & Tour.
Will Meet @ 12:30
Brief Mtg & Tour.

12:25 Returned from lunch.
During lunch Scott & I discussed
SWMUs we asked facility
about 8,000-gallon Acid Tank
this tank is inactive.

Tim Schultz

(28)

Before Beginning Tour we discussed the facility operation & dates the various processes began closed etc.

Two 8,000 gallon tanks
One for Virgin HCl
One for Waste HCl & HF

One 3,000 gallon Pickle tank feed into Waste HCl tank.

The Drum Storage Building
Sealed Concrete, Diked
Contained Sumped, installed in '89
40' x 80', Two Seperate Diked areas. 1 - Hazardous Waste
2 - for Alnico Swarf
Kurt Schmude

(29)

Former Drum Storage Area
Gravel Pad
Roped off.
Remediation activities were performed for this area
Closure occured in 1988
WDNR approved closure.

WWTS (Sanitary)
Activated Sludge
Dynacel in Detroit
Removes the
1985 installed

Pond System 1965
Material TCLP & EPTox
Non-haz. Special Waste
Ponds Constructed of Bentonite

Kurt Schmude

(30)

3 million Gallons.

Ponds 2, 3, & 4

200,000 - 300,000 gallons each

Pond 1

1.5 M gallons.

Overflow is in Pond 4

Can Pump from 3 & 4

Overflow leads to Pond 5.

Foundry Sand Roll-off

12 yds picked up

2 times / wk.

Used since '82 or '83

Foundry was land bypasses

back in ~ '81

Neutralization Tank is ~ 9,000

gallons.

Prior to '81 when RCRA

went into

— Trust Schedule —

(31)

Satellite Accumulation Areas

used since 1980 or '81

Chlorinated Building 1 → 2

Building 5 → 1

Building 2, 3, 4 & 7 → 3 or 5

Building 11 & 14 → 2 or 3

Building 6 → Hanger

Non-Chlorinated Buildings 2, 3, 4 & 7 → 2

MEK, acetone, Methanol Mixed

together & shipped out

Acetone is kept separate

Trust Shed

Air permits

Facility provided a list of processes for which an air permit is required.

Compliance problems:

NOV for 2 issues

~~Dust~~ Collector was shut down

Oven was Moved.

13:10 Began Tour.

Building 1 West end of facility

13:15 Point (1) Building 1

Northeast

Dust Collector.

Trent Schade

13:15 Point (2) Building 1

North

SAA for Chloroethane

Left Building 1

To Building 5

Floor drains in Facility Buildings Go to Ponds.

South of Building 5

3 Foundry Sand Roll off Box

On concrete ~~Chanel~~ T.S.

Waste Mgt. Box

Lined with plastic

Point (3) NW

Roll off Box

Trent Schade

(84)

13:2? Pit (4) NE
Dust Collectors
on South Side
Building 5

13:35 Pit (5) Building 5
Rare Earth Dept.
South
Trichloroethene

Pit (6) Build 5
Used 0.1 SAA
South

13:44 Left Building 5
to ~~Bui~~ ~~P~~ T.P.

Drum Storage Building
West Side is Lanthanides Waste
East Side is Sweat accumulation
Berm Separates the two Areas
Each Side has a sump
— Tait Schroder —

(85)

Floor is sealed concrete

13:47 Pit (7) DSB (Bldg. 16)
South East

13:49 Pit (8) South
DSB (Bldg 16)

Pit (9) East
Ponds
Pond 4 is in
Fore Ground.

13:52 Pit (10) Sewage T.P.
North east

Pit (11) North
Effluent from Plant
Concrete weir
is some Monitoring
— Tait Schroder —

Tank. Note Green Color of water from Neut. Tank.

13:55 Pict (12) Former DST North door is down Pole on Rest to AST (Asts store Paint)

Pict (13) SAA for Acetone West North of Building 4

Neutralization Tank Bottles collect Solids Solids are removed w/ Tank Truck

Tank Inlet

14:00 Pict (14) North Neutralization tank Note: stains are due to Blue fines that sometimes come with water due to paint pigments.

Pict (15) Paint Waste Bldg 10 North East Paint Storage Bldg.

to Bldg. 4

14:24 Pict (16) Waste HCl & HF ASTs 5000 gall. Rubber lined steel, Secondary Containment Tank Shade

(.

Used HCl is on Left
Picture is taken S.
on N. side of Building #

14:50 Left Building # 14
Back to Facility Representative
for exit Mtg.

14:55 Exit Mtg.
Facility Rep. wanted to
know about receiving
a copy of the report.

15:00 Concluded Meeting
Left facility.

Tim Shuler

Surrounding
North - Agriculture
Residential
Feed Mill
Stade
Northwest - Alan Manufacturing Co.
~~East~~ west - Agriculture
Southwest - Residence
Sunset Motel
South - Agriculture
Residential
Dino's Steak House.
U-Save Auto Rental
Fred & Frank's House
of Bottles
Lennox Heat & A/C
East - Residential

Tim Shuler

12/4/92

RECEIVED
WMD RCRA
RECORD CENTER

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

HRE-8J

November 25, 1992

Bob Lippe
Supervisor of Analytical Services
Arnold Engineering Company
3300 West Street
Marengo, Illinois 60152

Re: Visual Site Inspection
Arnold Engineering Company
Marengo, Illinois
EPA ID No. ILD 005 163 803

Dear Mr. Lippe:

The United States Environmental Protection Agency (U.S. EPA) Region V will conduct a Preliminary Assessment including a Visual Site Inspection (PA/VSI) at the referenced facility. This inspection is conducted pursuant to the Resource Conservation and Recovery Act, as amended (RCRA) Section 3007 and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA) Section 104(e). The referenced facility has generated, treated, stored, or disposed of hazardous waste subject to RCRA. The PA/VSI requires identification and systematic review of all solid waste streams at the facility. The objective of the PA/VSI is to determine whether or not releases of hazardous wastes or hazardous constituents have occurred or are occurring at the facility which may require further investigation. This analysis will also provide information to establish priorities for addressing any confirmed releases.

The visual site inspection of your facility is to verify the location of all solid waste management units (SWMUs) and areas of concern (AOCs) to make a cursory determination of their condition by visual observation. The definitions of SWMUs and AOCs are included in Attachment I. The VSI supplements and updates data gathered during a preliminary file review. During this site inspection, no samples will be taken. A sampling visit to ascertain if releases of hazardous waste or constituents have occurred may be required at a later date.

Assistance of some of your personnel may be required in reviewing solid waste flow(s) or previous disposal practices. The site inspection is to provide a technical understanding of the present and past waste flows and handling, treatment, storage, and disposal practices. Photographs of the facility are necessary to document the condition of the units at the facility and the waste management practices used.

The VSI has been scheduled for 9:00 a.m. on Wednesday, December 9, 1992. The inspection team will consist of Scott Storlid and Trent Schade of PRC Environmental Management, Inc., a contractor for the U.S. EPA. Representatives of the Illinois Environmental Protection Agency

(IEPA) may also be present. Your cooperation in admitting and assisting them while on site is appreciated.

The U.S. EPA recommends that personnel who are familiar with present and past manufacturing and waste management activities be available during the VSI. Access to any relevant maps, diagrams, hydrogeologic reports, environmental assessment reports, sampling data sheets, environmental permits (air, NPDES), manifests and/or correspondence is also necessary, as such information is needed to complete the PA/VSI.

If you have any questions, please contact me at (312) 886-4448 or Francene Harris at (312) 886-2884. A copy of the Preliminary Assessment/Visual Site Inspection Report, excluding the conclusions and Executive Summary portion will be sent when the report is available.

Sincerely yours,

for Kevin M. Pierard, Chief
OH/MN Technical Enforcement Section

Enclosure

cc: Larry Eastep, IEPA